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- I. Model Problems.
- II. Practice Problems
- III. Mixed Problems

### Web Resources

Equation of A Circle

[www.mathwarehouse.com/geometry/circle/equation-of-a-circle.php](http://www.mathwarehouse.com/geometry/circle/equation-of-a-circle.php)

Pictures of Equations of Circles

[www.mathwarehouse.com/geometry/circle/images/equation-of-circle/](http://www.mathwarehouse.com/geometry/circle/images/equation-of-circle/)

Free Graph Paper : [www.mathworksheetsgo.com/paper/](http://www.mathworksheetsgo.com/paper/)

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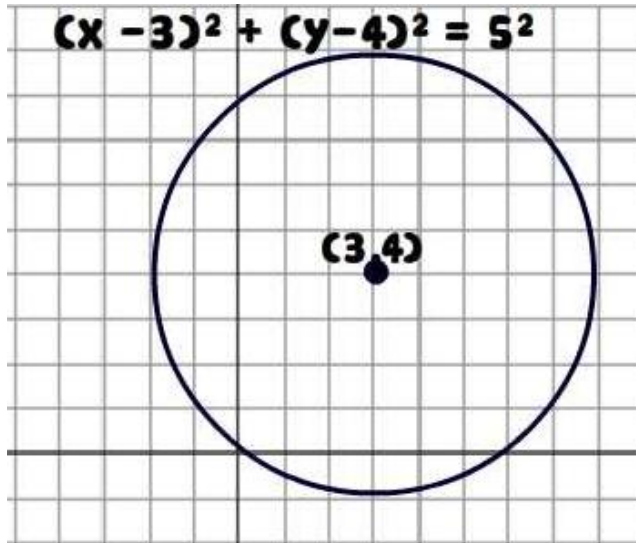
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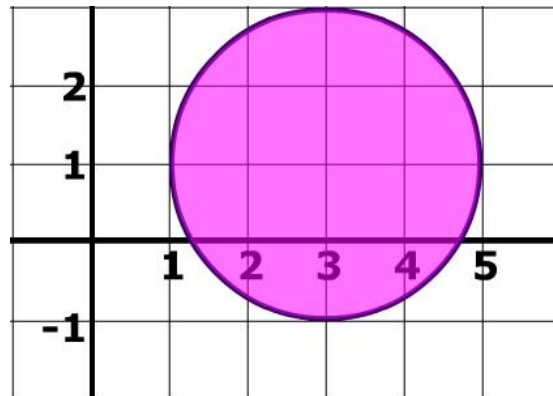
## Standard Form Equation of A Circle

Example of the Standard Form Equation of a Circle



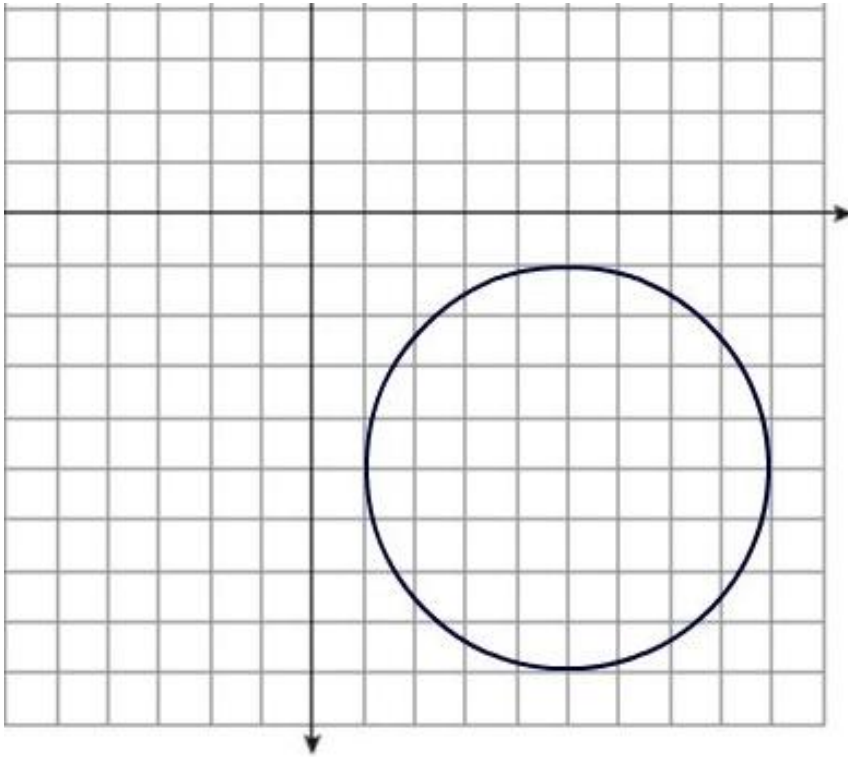
### Model Problem 1

2) What is the equation of the circle on the right?



**Model Problem 2**

What is the equation of the circle below?

**Model Problem 3 and 4**

Identify the coordinates of the center and the length of the radius in the circles below

$(X - 5)^2 + (y + 2)^2 = 4$       **radius:**                      **Center:** (\_\_, \_\_)

$(X + 2)^2 + (y - 1)^2 = 9$       **radius:**                      **Center:** (\_\_, \_\_)

**Part I**

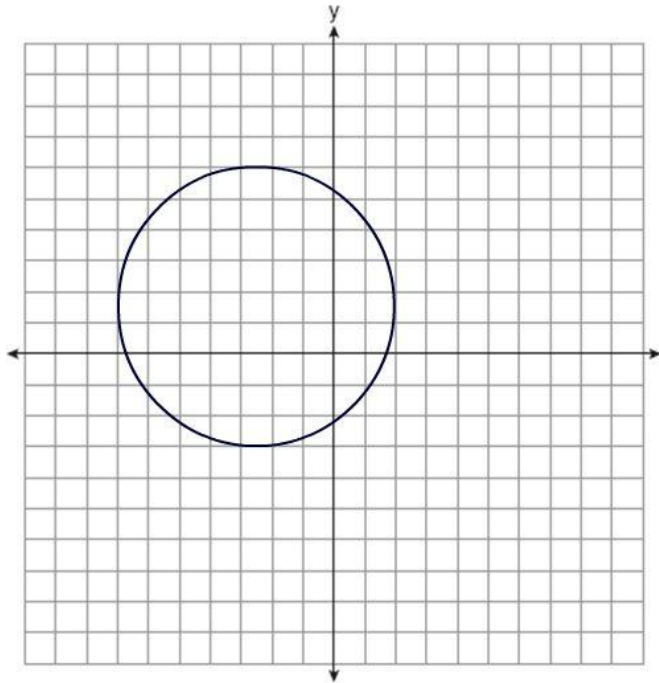
Identify the coordinates of the center and the length of the radius in the circles below.

1)  $(X - 1)^2 + (y - 3)^2 = 9$       **radius:**                      **Center:** (\_\_, \_\_)

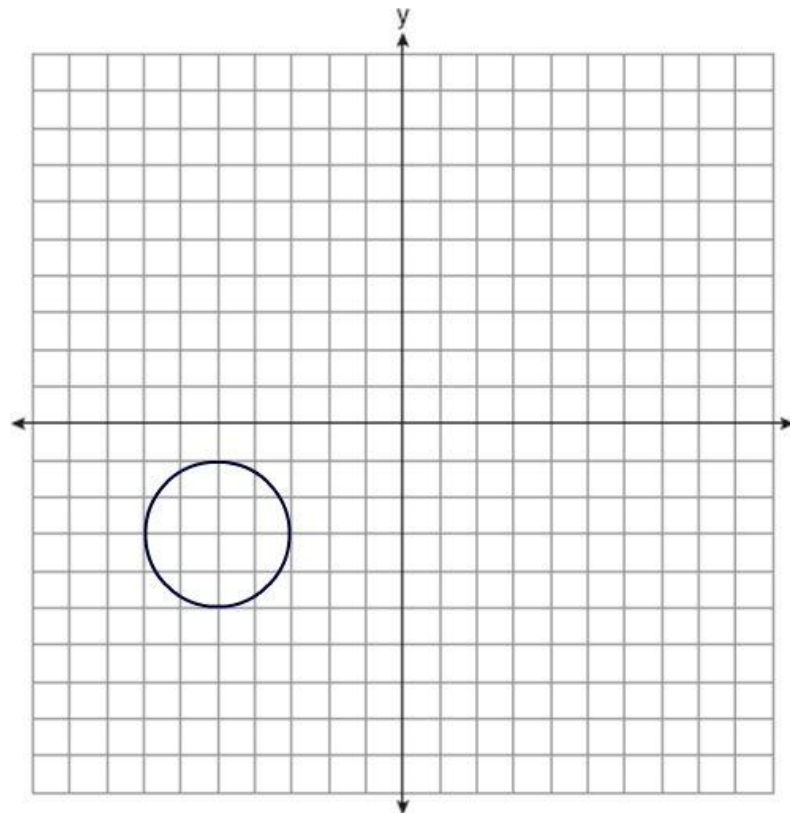
2)  $(X + 14)^2 + (y - 5)^2 = 16$       **radius:**                      **Center:** (\_\_, \_\_)

3)  $(X - 5)^2 + (y - 1)^2 = 25$       **radius:**                      **Center:** (\_\_, \_\_)

4) What is the equation of the circle pictured below



5) What is the equation of the circle pictured below



**Part II.**

Use the attached graph paper to draw the graph of the following equations

1)  $(X + 4)^2 + (y - 8)^2 = 6^2$

2)  $(X - 2)^2 + (y + 2)^2 = 7^2$

3)  $(x - 1)^2 + (y + 2)^2 = 64$

Write the equation of circle and draw its graph given the radius and center below

4) radius = 9   Center( -1,1)

**Equation:** \_\_\_\_\_

*Draw graph on attached sheet*

5) radius = 3   Center( -5,4)

**Equation:** \_\_\_\_\_

*Draw graph on attached sheet*

6) radius = 4   Center( 3,1)

**Equation:** \_\_\_\_\_

**Homework:**

1)  $(x + 2)^2 + (y - 12)^2 = 36$

**radius:**

**Center:** (\_\_, \_\_)

2)  $(y+7)^2 + (X +5)^2 = 49$

**radius:**

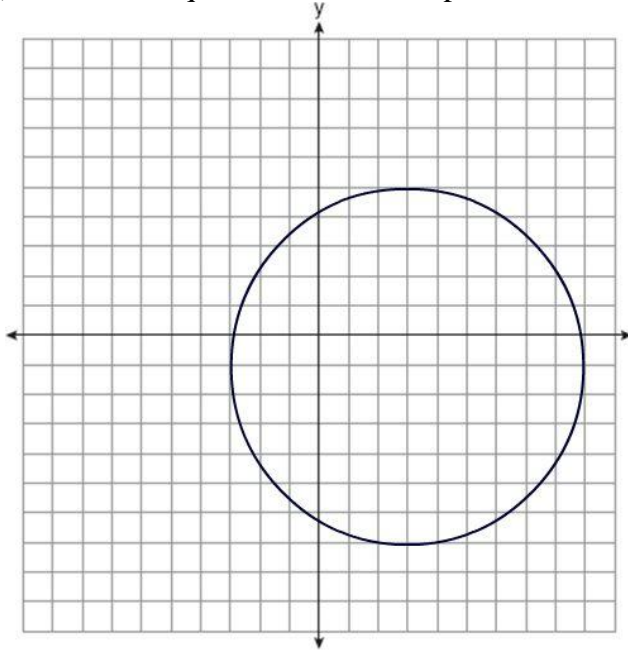
**Center:** (\_\_, \_\_)

3)  $(X +8)^2 + (y+17)^2 = 49$

**radius:**

**Center:** (\_\_, \_\_)

4) What is the equation of the circle pictured below?



5) What is the equation of the circle pictured below?

